

MONTHLY WEATHER REVIEW,

JANUARY, 1879.

WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

In compiling the present REVIEW the following data, received up to February 14th, have been made use of, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at 119 Signal Service stations and 11 Canadian stations, as telegraphed to this office; monthly journals and means, 121 and 144 respectively, from the former, and monthly means from 12 of the latter; reports from 21 special Sunset stations; 243 monthly registers from Voluntary Observers; 52 monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; monthly reports from Voluntary Observers and the local Weather Services of the States of Iowa and Missouri; reliable newspaper extracts; special reports.

BAROMETRIC PRESSURE.

Upon chart No. II is exhibited by the isobaric lines the general distribution of the atmospheric pressure, as reduced to sea-level, for the month. Compared with the means for January of previous years, the pressure is above the normal on the Pacific coast and from Wyoming and New Mexico to the Lower Ohio valley, and thence to the Gulf of Mexico and southern portion of the South Atlantic States. Over Lake Superior and from the Lower Lakes to North Carolina and thence northeastward it has been below the normal, especially over New England, the deficiency gradually increasing to Maine, where, at Portland, the mean pressure is 0.16 inch below the normal.

The Local Barometric Ranges for the month, as reduced to sea-level, have been largest over New England, and from Dakota and Minnesota to Kansas. Taken by districts they vary as follows:—New England, from 1.83 at Eastport, to 1.19 at New Haven; summit of Mt. Washington, 1.26; Middle Atlantic States, 1.25 at Philadelphia to 1.02 at Lynchburg; South Atlantic States, 1.00 at Charlotte to 0.64 at Jacksonville; Lake region, 0.87 at Chicago to 1.16 at Oswego and 1.35 at Duluth; Ohio valley and Tennessee, 1.09 at Morgantown, and 1.13 at Knoxville to 0.76 at Nashville; Gulf States, 0.37 at Key West to 1.00 at Corsicana and 1.14 Brackettsville; the Northwest and Eastern slope of the Rocky mountains, 0.98 at St. Louis to 1.10 at Fort Sill, 1.48 at North Platte, 1.57 at Yankton and 1.71 at Pembina; Rocky mountain stations, 0.71 at Santa Fe to 0.83 at Denver; summit of Pikes Peak, 0.63; Western Plateau, 0.81 at Pioche to 1.01 at Boise City; Pacific coast, 0.41 at Campo, and 0.52 at San Diego to 1.13 at Portland, Or.

Areas of High Barometer.—Eleven are described below. Four of them, namely: Nos. I, II, V and VI, deserve special notice as they produced the minimum temperatures of the month over the regions traversed by them.

No. I.—This area, which was over the northwest territory of British America during the 1st and 2d of January, moved slowly south and east over the United States from the 3d to the 7th, and over the Bermudas on the 8th. A telegraphic dispatch received at St. Paul, Minn., January 3d, reported the following low temperatures in British America: —60° at Battlefield, the capital of the Northwest Territory; —35° at Ft. Pelly, and —29° at Winnipeg. The lowest temperatures recorded over the United States, (Signal Service observations,) were: over the Northwest, —32° at Pembina on the 1st and at Breckenridge on the 2d; in the Mississippi valley, —26.02 at St. Paul and La Crosse on the 2d, to 20° at New Orleans on the 6th; in the Atlantic States, —5° at Fort Whipple, Va., on the 3d, to 25° at Jacksonville, Fla., on the 7th; and at Prospect, Bermudas, 45.05 on the 8th. On the 1st the pressure rose west of the Mississippi, and on the morning of this day the isotherm of zero curved through Wisconsin, Nebraska, Colorado and Idaho. 2d, th pressure continued highest over the Northwest, and rising thence to the Gulf, South and Middle Atlantic